

# SEQUENCE LISTING

<110> Rosanne M. Crooke  
Mark J. Graham  
Kristina M. Lemonidis

<120> ANTISENSE MODULATION OF ACYL COENZYME A CHOLESTEROL ACYLTRANSFERASE-1 EXPRESSION

<130> ISPH-0589

<160> 62

<210> 1  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 1  
tccgtcatcg ctcctcaggg 20

<210> 2  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 2  
atgcattctg cccccaagga 20

<210> 3  
<211> 1767  
<212> DNA  
<213> Homo sapiens

<220>  
<221> CDS  
<222> (28)...(1734)

<400> 3  
ctaaagcgag aactgtcgcc cttcacg atg tgg ctc cgt gcc ttt atc ctg gcc 54  
Met Trp Leu Arg Ala Phe Ile Leu Ala  
1 5

act ctc tct gct tcc gcg gct tgg ggg gca cat ccg tcc tcg cca cct 102  
Thr Leu Ser Ala Ser Ala Ala Trp Gly Ala His Pro Ser Ser Pro Pro  
10 15 20 25

gtg gtg gac acc gtg cat ggc aaa gtg ctg ggg aag ttc gtc agc tta 150  
Val Val Asp Thr Val His Gly Lys Val Leu Gly Lys Phe Val Ser Leu  
30 35 40

gaa Glu	gga Gly	ttt Phe	gca Ala 45	cag Gln	cct Pro	gtg Val	gcc Ala	att Ile 50	ttc Phe	ctg Leu	gga Gly	atc Ile	cct Pro 55	ttt Phe	gcc Ala	198
aag Lys	ccg Pro	cct Pro 60	ctt Leu	gga Gly	ccc Pro	ctg Leu	agg Arg 65	ttt Phe	act Thr	cca Pro	ccg Pro	cag Gln 70	cct Pro	gca Ala	gaa Glu	246
cca Pro	tgg Trp 75	agc Ser	ttt Phe	gtg Val	aag Lys	aat Asn 80	gcc Ala	acc Thr	tcg Ser	tac Tyr	cct Pro 85	cct Pro	atg Met	tgc Cys	acc Thr	294
caa Gln 90	gat Asp	ccc Pro	aag Lys	gcg Ala	ggg Gly 95	cag Gln	tta Leu	ctc Leu	tca Ser	gag Glu 100	cta Leu	ttt Phe	aca Thr	aac Asn	cga Arg 105	342
aag Lys	gag Glu	aac Asn	att Ile 110	cct Pro	ctc Leu	aag Lys	ctt Leu	tct Ser 115	gaa Glu	gac Asp	tgt Cys	ctt Leu	tac Tyr	ctc Leu 120	aat Asn	390
att Ile	tac Tyr	act Thr	cct Pro 125	gct Ala	gac Asp	ttg Leu	acc Thr	aag Lys 130	aaa Lys	aac Asn	agg Arg	ctg Leu	ccg Pro 135	gtg Val	atg Met	438
gtg Val	tgg Trp 140	atc Ile	cac His	gga Gly	ggg Gly	ggg Gly	ctg Leu 145	atg Met	gtg Val	ggg Gly	gcg Ala	gca Ala	tca Ser	acc Thr	tat Tyr	486
gat Asp	ggg Gly 155	ctg Leu	gcc Ala	ctt Leu	gct Ala	gcc Ala	cat His 160	gaa Glu	aac Asn	gtg Val	gtg Val	gtg Val	gtg Val	acc Thr	att Ile	534
caa Gln 170	tat Tyr	cgc Arg	ctg Leu	ggc Gly	atc Ile 175	tgg Trp	gga Gly	ttc Phe	ttc Phe	agc Ser 180	aca Thr	ggg Gly	gat Asp	gaa Glu 185	cac His 185	582
agc Ser	cgg Arg	ggg Gly	aac Asn 190	tgg Trp	ggt Gly	cac His	ctg Leu	gac Asp 195	cag Gln	gtg Val	gct Ala	gcc Ala	ctg Leu 200	cgc Arg	tgg Trp	630
gtc Val	cag Gln	gac Asp	aac Asn 205	att Ile	gcc Ala	agc Ser	ttt Phe	gga Gly 210	ggg Gly	aac Asn	cca Pro	ggc Gly	tct Ser 215	gtg Val	acc Thr	678
atc Ile	ttt Phe 220	gga Gly	gag Glu	tca Ser	gcg Ala	gga Gly	gga Gly 225	gaa Glu	agt Ser	gtc Val	tct Ser 230	ggt Val	ctt Leu	ggt Val	ttg Leu	726
tct Ser	cca Pro 235	ttg Leu	gcc Ala	aag Lys	aac Asn	ctc Leu 240	ttc Phe	cac His	cgg Arg	gcc Ala	att Ile 245	tct Ser	gag Glu	agt Ser	ggc Gly	774
gtg Val 250	gcc Ala	ctc Leu	act Thr	tct Ser	gtt Val 255	ctg Leu	gtg Val	aag Lys	aaa Lys	ggg Gly 260	gat Asp	gtc Val	aag Lys	ccc Pro	ttg Leu 265	822

gct gag caa att gct atc act gct ggg tgc aaa acc acc acc tct gct	870
Ala Glu Gln Ile Ala Ile Thr Ala Gly Cys Lys Thr Thr Thr Ser Ala	
270 275 280	
gtc atg gtt cac tgc ctg cga cag aag acg gaa gag gag ctc ttg gag	918
Val Met Val His Cys Leu Arg Gln Lys Thr Glu Glu Glu Leu Leu Glu	
285 290 295	
acg aca ttg aaa atg aaa ttc tta tct ctg gac tta cag gga gac ccc	966
Thr Thr Leu Lys Met Lys Phe Leu Ser Leu Asp Leu Gln Gly Asp Pro	
300 305 310	
aga gag agt caa ccc ctt ctg ggc act gtg att gat ggg atg ctg ctg	1014
Arg Glu Ser Gln Pro Leu Leu Gly Thr Val Ile Asp Gly Met Leu Leu	
315 320 325	
ctg aaa aca cct gaa gag ctt caa gct gaa agg aat ttc cac act gtc	1062
Leu Lys Thr Pro Glu Glu Leu Gln Ala Glu Arg Asn Phe His Thr Val	
330 335 340 345	
ccc tac atg gtc gga att aac aag cag gag ttt ggc tgg ttg att cca	1110
Pro Tyr Met Val Gly Ile Asn Lys Gln Glu Phe Gly Trp Leu Ile Pro	
350 355 360	
atg cag ttg atg agc tat cca ctc tcc gaa ggg caa ctg gac cag aag	1158
Met Gln Leu Met Ser Tyr Pro Leu Ser Glu Gly Gln Leu Asp Gln Lys	
365 370 375	
aca gcc atg tca ctc ctg tgg aag tcc tat ccc ctt gtt tgc att gct	1206
Thr Ala Met Ser Leu Leu Trp Lys Ser Tyr Pro Leu Val Cys Ile Ala	
380 385 390	
aag gaa ctg att cca gaa gcc act gag aaa tac tta gga gga aca gac	1254
Lys Glu Leu Ile Pro Glu Ala Thr Glu Lys Tyr Leu Gly Gly Thr Asp	
395 400 405	
gac act gtc aaa aag aaa gac ctg ttc ctg gac ttg ata gca gat gtg	1302
Asp Thr Val Lys Lys Lys Asp Leu Phe Leu Asp Leu Ile Ala Asp Val	
410 415 420 425	
atg ttt ggt gtc cca tct gtg att gtg gcc cgg aac cac aga gat gct	1350
Met Phe Gly Val Pro Ser Val Ile Val Ala Arg Asn His Arg Asp Ala	
430 435 440	
gga gca ccc acc tac atg tat gag ttt cag tac cgt cca agc ttc tca	1398
Gly Ala Pro Thr Tyr Met Tyr Glu Phe Gln Tyr Arg Pro Ser Phe Ser	
445 450 455	
tca gac atg aaa ccc aag acg gtg ata gga gac cac ggg gat gag ctc	1446
Ser Asp Met Lys Pro Lys Thr Val Ile Gly Asp His Gly Asp Glu Leu	
460 465 470	
ttc tcc gtc ttt ggg gcc cca ttt tta aaa gag ggt gcc tca gaa gag	1494
Phe Ser Val Phe Gly Ala Pro Phe Leu Lys Glu Gly Ala Ser Glu Glu	
475 480 485	
gag atc aga ctt agc aag atg gtg atg aaa ttc tgg gcc aac ttt gct	1542



<211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Primer

<400> 7  
 gaaggtgaag gtcggagtc 19

<210> 8  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Primer

<400> 8  
 gaagatggtg atgggatttc 20

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Probe

<400> 9  
 caagcttccc gttctcagcc 20

<210> 10  
 <211> 2022  
 <212> DNA  
 <213> Mus musculus

<220>  
 <221> CDS  
 <222> (129)...(1817)

<400> 10  
 aattcctcgt atcatacaat tgattgagag aaatttgctg gtaccctcca ggagtggggc 60  
 aggatcagtg tgcccccttt gtcacaggct ggagacctcc ctgtcctgca aacctgtagc 120  
 ctcctacc atg tgc ctc tct gct ctg atc ctg gtg tca ctt gca gca ttc 170  
 Met Cys Leu Ser Ala Leu Ile Leu Val Ser Leu Ala Ala Phe  
 1 5 10

aca gca ggg gca gga cat cca tcc tca cca ccc atg gtg gac acc gtg 218  
 Thr Ala Gly Ala Gly His Pro Ser Ser Pro Pro Met Val Asp Thr Val  
 15 20 25 30

caa ggc aaa gtc ctg ggg aag tac atc agc tta gaa gga ttc aca cag 266  
 Gln Gly Lys Val Leu Gly Lys Tyr Ile Ser Leu Glu Gly Phe Thr Gln  
 35 40 45

cct gtg gcc gtc ttc ctg gga gtc ccc ttt gcc aag ccc cct ctt gga 314

Pro Val Ala Val Phe Leu Gly Val Pro Phe Ala Lys Pro Pro Leu Gly	
50 55 60	
tct ctg agg ttt gct cca cca cag cct gca gag ccc tgg agc tcc gtg	362
Ser Leu Arg Phe Ala Pro Pro Gln Pro Ala Glu Pro Trp Ser Ser Val	
65 70 75	
aag aat gcc acc tcc tac cct cct atg tgc ttc caa gac cca gtg aca	410
Lys Asn Ala Thr Ser Tyr Pro Pro Met Cys Phe Gln Asp Pro Val Thr	
80 85 90	
ggg caa ata gtc aat gac ctc cta act aac aga aag gag aaa att cct	458
Gly Gln Ile Val Asn Asp Leu Leu Thr Asn Arg Lys Glu Lys Ile Pro	
95 100 105 110	
ctc cag ttt tct gaa gac tgt ctc tac ctg aat att tac act cca gct	506
Leu Gln Phe Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala	
115 120 125	
gac ttg aca aag agt gac aga ttg cca gtg atg gtg tgg atc cat gga	554
Asp Leu Thr Lys Ser Asp Arg Leu Pro Val Met Val Trp Ile His Gly	
130 135 140	
ggg gga cta gtg tta ggt ggg gca tca acc tat gat gga ctg gtc ctg	602
Gly Gly Leu Val Leu Gly Gly Ala Ser Thr Tyr Asp Gly Leu Val Leu	
145 150 155	
tct acg cat gaa aat gtc gtg gtg gtg gtc atc caa tac cgt ttg ggc	650
Ser Thr His Glu Asn Val Val Val Val Ile Gln Tyr Arg Leu Gly	
160 165 170	
atc tgg gga ttc ttc agc aca ggg gat gaa cac agc agg ggg aac tgg	698
Ile Trp Gly Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp	
175 180 185 190	
ggg cac ttg gac cag gtg gct gca cta cac tgg gtc cag gac aac att	746
Gly His Leu Asp Gln Val Ala Ala Leu His Trp Val Gln Asp Asn Ile	
195 200 205	
gct aaa ttt gga ggt gac cca ggc tct gtg acc atc ttt gga gag tca	794
Ala Lys Phe Gly Gly Asp Pro Gly Ser Val Thr Ile Phe Gly Glu Ser	
210 215 220	
gca gga ggt gaa agt gtc tct gtt ctt gtg ttg tct ccc ttg gcc aag	842
Ala Gly Gly Glu Ser Val Ser Val Leu Val Leu Ser Pro Leu Ala Lys	
225 230 235	
aat ctc ttc cag agg gct att tct gaa agt ggt gtg gcc ctc act gca	890
Asn Leu Phe Gln Arg Ala Ile Ser Glu Ser Gly Val Ala Leu Thr Ala	
240 245 250	
ggc ctg gtc aag aag aac acc agg cct ttg gct gag aaa att gct gtc	938
Gly Leu Val Lys Lys Asn Thr Arg Pro Leu Ala Glu Lys Ile Ala Val	
255 260 265 270	
ata tct ggt tgt aaa aac acc act tcc gct gcc atg gtt cac tgc ctt	986
Ile Ser Gly Cys Lys Asn Thr Thr Ser Ala Ala Met Val His Cys Leu	

				275				280				285							
cgc	cag	aag	aca	gag	gaa	gag	ctc	ttg	ggg	acc	aca	cta	aaa	ttg	aat	1034			
Arg	Gln	Lys	Thr	Glu	Glu	Glu	Leu	Leu	Gly	Thr	Thr	Leu	Lys	Leu	Asn				
			290				295				300								
ctt	ttt	aag	ctg	gat	ttg	cat	gga	gac	tcc	aga	cag	agc	cat	ccc	ttt	1082			
Leu	Phe	Lys	Leu	Asp	Leu	His	Gly	Asp	Ser	Arg	Gln	Ser	His	Pro	Phe				
			305				310				315								
gtt	ccc	act	gtg	ctt	gat	gga	gtg	ttg	ctg	cca	aag	atg	cct	gag	gag	1130			
Val	Pro	Thr	Val	Leu	Asp	Gly	Val	Leu	Leu	Pro	Lys	Met	Pro	Glu	Glu				
			320				325				330								
atc	ctg	gct	gag	aag	aac	ttc	aac	aca	gtg	ccc	tac	atc	gtg	gga	atc	1178			
Ile	Leu	Ala	Glu	Lys	Asn	Phe	Asn	Thr	Val	Pro	Tyr	Ile	Val	Gly	Ile				
			335				340				345				350				
aac	aag	caa	gag	ttt	ggc	tgg	att	ctg	cca	act	atg	atg	aac	tac	cca	1226			
Asn	Lys	Gln	Glu	Phe	Gly	Trp	Ile	Leu	Pro	Thr	Met	Met	Asn	Tyr	Pro				
			355				360				365								
ccc	tct	gat	gta	aaa	ttg	gac	cag	atg	acg	gcc	atg	tct	ctc	ttg	aag	1274			
Pro	Ser	Asp	Val	Lys	Leu	Asp	Gln	Met	Thr	Ala	Met	Ser	Leu	Leu	Lys				
			370				375				380								
aag	tcc	tct	ttt	ctt	ctt	aac	ctc	cct	gag	gat	gca	att	gca	gtg	gcc	1322			
Lys	Ser	Ser	Phe	Leu	Leu	Asn	Leu	Pro	Glu	Asp	Ala	Ile	Ala	Val	Ala				
			385				390				395								
att	gag	aag	tat	tta	aga	gat	aaa	gat	tac	aca	ggc	aga	aat	aaa	gac	1370			
Ile	Glu	Lys	Tyr	Leu	Arg	Asp	Lys	Asp	Tyr	Thr	Gly	Arg	Asn	Lys	Asp				
			400				405				410								
caa	ctt	ctg	gaa	ttg	att	ggg	gat	gtg	gta	ttc	ggg	gta	cca	tct	gtg	1418			
Gln	Leu	Leu	Glu	Leu	Ile	Gly	Asp	Val	Val	Phe	Gly	Val	Pro	Ser	Val				
			415				420				425				430				
att	gtg	tcc	cgt	gga	cat	aga	gat	gcc	gga	gcc	ccc	aca	tac	atg	tat	1466			
Ile	Val	Ser	Arg	Gly	His	Arg	Asp	Ala	Gly	Ala	Pro	Thr	Tyr	Met	Tyr				
			435				440				445								
gag	ttt	caa	tat	agt	cca	agc	ttc	tcg	tca	gaa	atg	aaa	cca	gat	acg	1514			
Glu	Phe	Gln	Tyr	Ser	Pro	Ser	Phe	Ser	Ser	Glu	Met	Lys	Pro	Asp	Thr				
			450				455				460								
gtg	gta	gga	gac	cat	gga	gat	gaa	atc	tac	tct	gtc	ttt	ggg	gcc	cca	1562			
Val	Val	Gly	Asp	His	Gly	Asp	Glu	Ile	Tyr	Ser	Val	Phe	Gly	Ala	Pro				
			465				470				475								
att	tta	aga	ggg	ggg	acc	tca	gaa	gag	gag	atc	aac	ctc	agc	aag	atg	1610			
Ile	Leu	Arg	Gly	Gly	Thr	Ser	Glu	Glu	Glu	Ile	Asn	Leu	Ser	Lys	Met				
			480				485				490								
atg	atg	aaa	ttc	tgg	gcc	aac	ttt	gct	agg	aat	ggg	aat	ccc	aat	gga	1658			
Met	Met	Lys	Phe																

caa ggg ctg ccc cat tgg cca gag tat gac caa aag gaa ggt tat ctg	1706
Gln Gly Leu Pro His Trp Pro Glu Tyr Asp Gln Lys Glu Gly Tyr Leu	
515 520 525	

cag att gga gcc acc acc caa caa gcc cag aag ctg aaa gaa aaa gaa	1754
Gln Ile Gly Ala Thr Thr Gln Gln Ala Gln Lys Leu Lys Glu Lys Glu	
530 535 540	

gtg gct ttc tgg act gaa ctt ctg gct aag aag caa ctg ccg aca gaa	1802
Val Ala Phe Trp Thr Glu Leu Leu Ala Lys Lys Gln Leu Pro Thr Glu	
545 550 555	

cac act gag ctg tga atgggagact ctgtcagcct caccctcagg ggagcccaaa	1857
His Thr Glu Leu	
560	

tgagactact ttacatggaa gatgattgtg gccaaaggctt tggggagact gcagaattgt	1917
gtgggtgggag tggacagagg ccagagagag aatatttgca catgtggact caatttgaaa	1977
aaataaattt tgttccataa gtcaaaaaaaaa aaaaaaaaaa aggaa	2022

<210> 11  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Primer

<400> 11	
ctgccgacag aacacactga	20

<210> 12  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Primer

<400> 12	
tcatttgggc tcccctgag	19

<210> 13  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR Probe

<400> 13	
tgtgaatggg agactctgtc agcctcac	28

<210> 14  
 <211> 20  
 <212> DNA



<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 14

ggcaaattca acggcacagt

20

<210> 15

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 15

gggtctcgct cctggaagat

20

<210> 16

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 16

aaggccgaga atgggaagct tgtcatc

27

<210> 17

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 17

ccacatcgtg aagggcgaca

20

<210> 18

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 18

ccccaagccg cggaagcaga

20

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide  
  
 <400> 19  
 aacttcccca gcactttgcc 20  
  
 <210> 20  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 20  
 ggtacgaggt ggcattcttc 20  
  
 <210> 21  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 21  
 gtggatccac accatcaccg 20  
  
 <210> 22  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 22  
 tgtgctgaag aatccccaga 20  
  
 <210> 23  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 23  
 tgtcctggac ccagcgcagg 20  
  
 <210> 24  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide

<400> 24  
 ctcccgtga ctctccaaag 20

<210> 25  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide

<400> 25  
 tggcccggtg gaagaggttc 20

<210> 26  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide

<400> 26  
 acccagcagt gatagcaatt 20

<210> 27  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide

<400> 27  
 cgtcttctgt cgcaggcagt 20

<210> 28  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide

<400> 28  
 caatcacagt gcccagaagg 20

<210> 29  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide

<400> 29

cctgcttggtt aattccgacc	20
<210> 30	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 30	
ggataggact tccacaggag	20
<210> 31	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 31	
gttcctccta agtatttctc	20
<210> 32	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 32	
ccacaatcac agatgggaca	20
<210> 33	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 33	
atccccgtgg tctcctatca	20
<210> 34	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 34	
cccagaattt catcaccatc	20

<210> 35  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 35  
ggtggttgca ccaatctgca 20

<210> 36  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 36  
agctctatgt gttctgtctg 20

<210> 37  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 37  
cttcattcac agctctatgt 20

<210> 38  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 38  
gctcccaagg ccggctggat 20

<210> 39  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligonucleotide

<400> 39  
cactgatcct gccccactcc 20

<210> 40  
<211> 20

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 40  
 ggaggtctcc agcctgtgac 20  
  
 <210> 41  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 41  
 atggtaggag gctacaggtt 20  
  
 <210> 42  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 42  
 agagaggcac atggtaggag 20  
  
 <210> 43  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 43  
 ggatcagagc agagaggcac 20  
  
 <210> 44  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 44  
 ggatgtcctg cccctgtgt 20  
  
 <210> 45  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antisense Oligonucleotide  
  
 <400> 45  
 acttccccag gactttgcct 20  
  
 <210> 46  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 46  
 gactcccagg aagacggcca 20  
  
 <210> 47  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 47  
 aggtcattga ctatttgccc 20  
  
 <210> 48  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 48  
 atcatagggt gatgccccac 20  
  
 <210> 49  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Antisense Oligonucleotide  
  
 <400> 49  
 gtgctgaaga atccccagat 20  
  
 <210> 50  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Antisense Oligonucleotide

<400> 50

cagtgtagtg cagccacctg

20

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 51

gtcctggacc cagtgtagtg

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 52

tgaccaggcc tgcagtgagg

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 53

tggtcccca gagctcttc

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 54

tggccgtcat ctggtccaat

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide



<400> 55	
cctagcaaag ttggcccaga	20
<210> 56	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 56	
tgtccattgg gattcccatt	20
<210> 57	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 57	
cattcacagc tcagtgtgtt	20
<210> 58	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 58	
cagagtctcc cattcacagc	20
<210> 59	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 59	
tcatttgggc tcccctgagg	20
<210> 60	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 60	
cacacaattc tgcagtctcc	20

